

response, the claims have been accordingly amended.

In general, the present invention is directed to a process for converting hazardous waste materials containing at least one volatile metal into an environmentally safe glass product. As stated in the claims, the hazardous waste material is heated in a direct contact radiant heating device under conditions that not only cause molten glass to form, but also cause substantially all of the volatile metals to vaporize and enter a flue gas stream. As now amended, all of the claims require the flue gas stream to be filtered in order to remove the vaporized metals.

In the Office Action, all of the claims were rejected in view of the Bureau of Mines publication. As discussed during the interview, however, as opposed to producing conditions that vaporize substantially all of the volatile metals contained within the waste being processed, the Bureau of Mines publication teaches encapsulating the metals into a vitrified product. For instance, on page 8, the Bureau of Mines publication discusses minimizing fume generation by limiting moisture and carbon in the feed in order to minimize entrainment of solids in the fume. Further, on page 50, the Bureau of Mines publication also discusses a preferred mode which provides for the "greater recovery of volatile heavy metals in the vitrified product."

Thus, as evidenced above, the Bureau of Mines publication teaches encapsulating volatile metals within the vitrified

product. The process of the present invention, however, is specifically directed to vaporizing substantially all of the volatile metals from the hazardous waste materials that are being processed. Consequently, it is believed that not only is the process of the present invention is different than the process disclosed in the Bureau of Mines publication, but also that the resulting products differ. As such, it is believed that the claims patentably define over the cited reference.

After the personal interview with the Examiners, Examiner McGuthry-Banks faxed to Applicant a copy of U.S. Patent No. 3,812,620 to Titus, et al. for consideration with respect to Applicant's claimed invention. Titus, et al. is directed to an apparatus and process for segregating and decomposing heterogeneous waste materials. Specifically, Titus, et al. is directed to processing dry rubbish which typically contains paper, animal and vegetable waste materials, plastic materials, glass and ceramic materials, and miscellaneous materials such as furniture construction materials, rubber, paint, textiles, sweepings and the like. In order to process these materials, Titus, et al. teaches placing the materials in a substantially air tight furnace having a non-oxidizing atmosphere so that the materials undergo pyrolytic decomposition.

As opposed to Titus, et al., the claims of the present invention are specifically limited to the processing of hazardous


waste materials. Further, the process of the present invention is directed to vaporizing substantially all volatile metals contained within the waste materials. The vaporized metals are then filtered from a flue gas stream. As opposed to the present invention, Titus, et al. fails to disclose or suggest filtering a flue gas stream in order to remove vaporized heavy metals. As such, it is believed that the claims as now amended also patentably define over Titus, et al..

In the Office Action, the claims were also rejected under 35 U.S.C. § 112 for various informalities. In response, claims 20 and 13 have been amended as suggested. Further, claims 21-23 have been canceled and withdrawn from further consideration as being drawn to a non-elected invention.

In summary, it is respectfully submitted that the claims as presently amended are patentably distinct over the prior art of record. Thus, it is submitted that the present application is in complete condition for allowance and favorable action, therefore, is respectfully requested. Examiner McGuthry-Banks is invited and encouraged to telephone the undersigned should any issues remain after consideration of the present response.

Please charge any additional fees required by this Amendment to Deposit Account No. 04-1403.

Respectfully requested,
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